

TO EVALUATE THE ROLE OF SIRAVYADHA IN VATAKANTAKA

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ABSTRACT :

Pain at ankle region is very common entity in today's life, estimated to affect 1 in 10 people's at some point during their lifetime. Ankle pain is observe more in athletes or sports persons due to its overuse and accidently done unnatural movements, the study also found that 90% of the injuries occurred while playing sports. It is more common in individuals having job of continuous prolong standing or walking, carrying heavy weight on their body, excessive inward rolling of the foot which seen in flat feet. The conventional treatments are fails to treat this condition without any side effects including permanent damage to ankle joint, also cost of some of these treatments are very high, The cost of treating ankle pain in the United States is estimated to be \$284 million each year, therefore there is a need to study a line of treatment which heals this condition without or with minimal side effects.

Key words:

INTRODUCTION: *Siravyadha* (Venepuncture) of *Raktamokshana* (Blood-letting) is an important Anushalya Karma (Para surgical procedure), it is "Aardhachikitsa" (Half treatment) as covering a wide range of indications like *Basti* (Ayurvedic enemas). According to Ashtanga sangraha *Siravyadha* (Venepuncture) is half the treatment or full treatment in *Shalyatantra*^[4] because blood is the seat for all diseases and there is no other *Dushyas* i.e. tissue that get vitiated than blood in patients of such diseases. *Vatakantaka* (pain at ankle region) is a *Vata Pradhana Vyadhi* (disease in which there is predominance of Vata) which causes pain at ankle region. The reasons of high prevalence of this disease is wearing high heeled & hard foot wears, improperly fitting footwear's, engaging in strenuous exercise especially jumping, running and standing for prolong peri-

ods.^[1] Therefore to prevent side effects, to save duration of treatment and to make it cost effective an Ayurvedic line of treatment must have developed, therefore *Siravyadha* (Venepuncture) was selected in this study to check the efficacy in management of *Vatakantaka* (pain at ankle region) by simple and safe technique.

Aims of study: To evaluate the efficacy of *Siravyadha chikitsa* in management of *Vatakantaka*.

Type of Study: Open clinical study.

Source of data: 30 patients of *Vatakantaka* (as per classical definition of *Vatakantaka* given in text) were selected randomly from *shalyatantra* (General surgery) Out patient department of D.Y.Patil Ayurvedic hospital according to selection criteria.

Materials & Method: In the selected patients single seating of *Siravyadha chikitsa* (Venepuncture treatment) was done. Changes in the pain, tenderness and

swelling were observed on 7th day, 14th day, 21st and 30th day. The site of *Siravyadha* (Venepuncture) was two *angulas* (patient's own finger breadth) above from *kshipra marma* of foot (vital point in between the big toe and the index toe), Medial Metatarsal vein which is a branch of dorsal venous arch of foot is there. [5, 6] Butterfly cannula is used to puncture the vein. *Siravyadha* was done till bloodletting was stop by itself.

Inclusion criteria:

1. Patients with Classical signs and symptoms of *Vatakantaka*.
2. Age group of 20 to 60 years was included.
3. Both male & female patients were included.
4. Those who were not included in other clinical trials.
5. Who has undergone written consent.

Exclusion criteria:

1. Fracture of ankle joint bones was excluded.
2. Completely ruptured tendons and ligaments of ankle joints were excluded.

3. Contraindications of *Siravyadha* as per classics were excluded.
4. Serological diseases like HIV, HBsAg were excluded.
5. Seronegative artropathies like RA, Psoriatic arthritis etc. were excluded.
6. Systemic disorders like Diabetes mellitus, Tuberculosis, *Hansen's* disease and Anemia were excluded.
7. Varicose Veins were excluded.
8. Coagulative disorders were excluded.

Diagnostic Criteria: Clinical features which are mention in classical definition of *Vatakantaka*. [7]

Assessment criteria: The improvement in the patient was assessed mainly on the basis of relief in the cardinal signs & symptoms of the disease. To assess the effect of therapy, signs and symptoms were given scoring depending upon their severity as follows.

A-subjective assessment:

Pain: Pain was assessed on the basis of visual analogue scale with grading given below.



Table -1: Showing intensity and gradation of Subjective assessment Pain.

Type of Pain	Intensity	Grade
No Pain	0	0
Mild	1 – 3	1
Moderate	4 – 6	2
Severe	7 – 9	3
Worst	10	4

B-objective assessment

1) Tenderness: Tenderness was assessed on grading given below.

Table -2: Showing gradation of Tenderness.

Result	Grade
No tenderness	0
Deep tenderness	1
Moderate tenderness	2
Mild tenderness	3
Hyperaesthesia	4

2) Swelling: Swelling was assessed on grading given below.

Table -3: showing gradation of Swelling:

Swelling at ankle region	Grade
Rarely	0
Occasionally	1
Frequently	2
Almost constant	3

OBSERVATION & RESULT

A- Showing the mean score change in pain at Ankle region before treatment and after treatment.

Pain at Ankle region	Before treatment		After treatment		Wilcoxon match-pairs signed-Ranks Test	P- value
	Mean score	S.D	Mean score	S.D.		
Trial	2.26	1.015	0.2	0.4842		<0.0001

After applying the Wilcoxon matched-pairs signed-ranks test, the two-tailed p - value is < 0.0001, considered extremely significant. Therefore we can say that the treatment i.e. *Siravyadha* is effective in reducing pain.

B-Showing the Mean score Change in Tenderness before treatment and after treatment

Tenderness	Before treatment		After treatment		Wilcoxon match-pairs signed-Ranks Test	P- value
	Mean score	S.D	Mean score	S.D		
Trial	2.067	1.015	0.233	0.4302		<0.0001

After applying the Wilcoxon matched-pairs signed-ranks test, the two-tailed p – value is < 0.0001, considered extremely significant. Therefore we can say that the treatment i.e. *Siravyadha* is effective in reducing tenderness.

C-Showing the Mean score Change in Swelling before treatment and after treatment.

	Before treatment		After treatment		Wilcoxon match-pairs signed-Ranks Test	P- value
	Mean score	S.D	Mean score	S.D		
Swelling Trial	1.567	0.971	0.266	0.5008		<0.0001

After applying the Wilcoxon matched-pairs signed-ranks test, the two-tailed p - value is < 0.0001, considered extremely significant. Therefore we can say that the treatment i.e. *Siravyadha* was effective in reducing Swelling.

Other observations found during study are as follows:

1. Out of 30 cases selected 53 % were Male and 47% were Female.
2. Out of 30 patients 20% were under age group of 20 to 30 years, 37% were under age group of 31 to 40 years, 30% were under age group of 41 to 50 years and 13% were under age group of 51 to 60 years.
3. Out of 30 patients 43.33% were wearing shoes in their daily lifestyle, 23.33% were wearing slipper in their daily lifestyle, 33.33 % were wearing sandal in their daily lifestyle and 0 were bare foot.
4. Out of 30 selected cases 30 % were suffering from Plantar fasciitis, 53 % were suffering from Sprained ankle, 17 % were suffering from Achilles tendinitis and no one was suffering from Retrocalcaneal bursitis.
5. Out of 30 selected cases 23% were comes under sedentary life style, 47% were comes under active work and 30% comes under labour work

DISCUSSION: Ayurvedic classics clearly mentioned that *Vatakantaka* is nothing but pain at ankle region arises due to improper position of foot during its movements or due to over exertion of foot.^[7] Here word

kantaka means pain is similar with pricked by *kantaka*. Vaidya Yashavant Joshi said that there is a *Shoola* and *Shotha* in *Vatakantaka*, and same cause by sprain or spasm anywhere in body also consider as *Vatakantaka*, but he clearly mentioned that as per *Sanhitas*, term *Vatakantaka* is only limited to *Gulpha Pradesh* (Ankle region).

^[8] *Raktamokshana* (Bloodletting) like *Basti* (Ayurvedic enemas) is worth the name “*Aardhachikitsa*” i.e. “Half treatment” as covering a wide range of indications, because of that *Siravyadha chikitsa* (Ayurvedic venepuncture treatment) has taken for study. All detailed of Ankle joint including Anatomy, Physiology, Functions, Arterial supply, Venous return, Nerve supply and various disease conditions which causes ankle pain like Plantar fasciitis, Retrocalcaneal bursitis, Achilles tendinitis, ankle sprains are studied in detailed for better understanding of topic and for further research.

Probable mode of action : In *Shodhana* (purification) therapy vitiated *Doshas* (bodily humours) should be removed from nearest routes. e.g. in *Vatadusti* (vitiating of Vata dosha)– *Basti* (Ayurvedic enemas) depending upon their *Mulasthanas* (main sites). *Raktamokshana* (Bloodletting) is also the *Shodhana* (purification) therapy, so it is recommended to remove the vitiated *Dosha* or blood from nearest route of *Roga Adhithana* (disease main or root site or location). In ankle pain all pathology

moves around *kandaras* (Tendons). *Kandara* is *upadhatu's* (sub tissue) of *Raktadhatu* (Blood). Therefore by pacifying vitiated *doshas* (bodily humours) from *Raktadhatu* (blood), ultimately *Upadhatu* (sub tissue) regain its health back. *Rakta* (Blood) is a *mula* (root) of *sharira* (body), *Vatadushta kandara's* (Tendon vitiated by Vata) with *snayu's* (Ligaments) reflects on *Raktadushti* (vitiation of blood), therefore by pacifying vitiated *doshas* (bodily humours) by *Raktamokshana* (Bloodletting), ultimately reducing sign and symptoms of *Vatakantaka* [7]. one of the pathological conditions which causes pain at ankle region is calcaneus spur. When normal mechanism of bone calcification is concerned, it is nothing but secretion of collagen molecules and ground substances, by osteoblast. These osteoblasts become entrapped called osteocytes. The osteoblasts also secrete a substance into osteocytes, to neutralize an inhibitor called pyrophosphate. So under normal conditions, there is limited growth of bone.[9] In abnormal conditions, calcium salts precipitate in arterial walls called arteriosclerosis. Likewise, calcium salts frequently deposit in degenerative tissues. The osteoblasts secrete large quantity alkaline phosphatase, when they are actively deposited on bone matrix. This phosphate is believed either to increase local concentration of inorganic phosphates in active collagen fibers. In such a way they cause deposition of calcium salts [9], by doing bloodletting certain amount of alkaline phosphate is taken away, In general the various mechanisms are going to change in body by bloodletting, such as local blood supply is improved, local metabolism is improved, local drainage system is improved, sympathetic nerve function improved, immune related T-lymphocytes are produced. In

this way, bloodletting from dorsal venous arch is beneficial.

CONCLUSIONS:

- *Vatakantaka* is one of the most common problems affecting people on the move.
- There is no much more difference between male and female ratio, still it is common in males comparing to females.
- The *Siravyadha* (venepuncture) method is simple, economical and required no hospitalization and could be done at OPD level.
- No adverse effects were observed in any of the cases.
- *Trividha karmas* (pre, main and post procedures) are equally important in *Siravyadha Chikitsa* (venepuncture therapy). If anyone of this procedure is not performed properly remarkable result will not be achieved.
- The Statistical analysis shows that in case of pain the mean before treatment was 2.26 and was reduced to 0.2 after 30 days, for tenderness the mean before treatment was 2.06 and was reduced to 0.23 after 30 days and that in case of swelling the mean before treatment was 1.56 and was reduced to 0.25 after 30 days.
- After applying the Wilcoxon matched-pairs signed-ranks test, the two-tailed p - values are < 0.0001, considered extremely significant, therefore we can say that the line of treatment i.e. *Siravyadha* (venepuncture) is effective in reducing sign and symptoms i.e. pain, tenderness and swelling in *Vatakantaka*.

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Source of support: Nil

Conflict of interest: None

Declared